## ABSTRACT OF THE DISCLOSURE

A catheter for treating arrhythmia comprises a catheter shaft of a double-cylinder structure where an inner shaft is slidably inserted in an outer shaft, a balloon installed so as to straddle between the tip portion of the inner shaft and the tip portion of the outer shaft, a pair of high frequency current-carrying electrodes of which at least one electrode is provided inside the balloon, and a temperature sensor for monitoring the temperature in the balloon. The front edge portion of the balloon at least in a deflated state protrude from the tip portion of the inner shaft. Alternatively, a tube that is more flexible than the inner shaft is provided on the tip portion of the inner shaft.